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APPLICATION FOR LETTERS PATENT

for

SATELLITE DISH ANTENNA SUPPORT SYSTEM

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FIELD OF THE INVENTION

This invention relates generally to the field of communication support systems and specifically to a support system for a satellite dish antenna that may be attached to the trailer hitch receiver portion of an automobile.

BACKGROUND OF THE INVENTION

Supports and mounting assemblies for television satellite dish antennae have traditionally been designed for household use. Generally, these dish antennae are affixed to the roof, chimney, porch, outside railings, or other portions of a building or structure. However, modern television viewing is no longer confined to the home as many automobiles, including sports utility vehicles, are becoming available with television viewing equipment as part of a standard accessory package. Unfortunately, the reception quality of these automobile television systems is quite poor. Frustrated with the lack of viewing options, users must often resort to only viewing images that are of the closed-circuit variety, for example video cassettes and digital video disks (DVDs).

Due to the mobility of automobiles, it is not practical to provide viewing opportunities comprising a hard-wired system, such as Cable television. In addition, even areas that are receptive to longer-term, yet non-hardwired, storage of vehicles do not offer Cable hook-ups, or other hard-wire viewing options. For example, many campgrounds offer electricity, water and other utility hook-ups for campers and other vehicles, but do not offer television viewing amenities.

Outdoor antennae designed to pick up UHF/VHF/FM signals are also not a viable alternative for the automobile television viewer. The limited channels available, plus the greater bulk and size preclude such systems from any practical automobile use. What is

needed is a support system for a satellite dish antenna that can be mounted to a vehicle, provides a variety of viewing options, and that is stable and easy for the average person to install.

SUMMARY OF THE INVENTION

Accordingly, it is an object of the present invention to provide alternative viewing capabilities for persons within, or in close proximity to, a vehicle such as an automobile.

It is also an object of the present invention to provide an easy and quick to install support system for a satellite dish television antenna that can be attached to a vehicle without damage or modification to the vehicle itself.

It is an additional object of the present invention to provide a support system for a satellite dish antenna that is stable and can withstand the rigors of travel inherent with attachment to the exterior of a vehicle.

It is a further object of the present invention to provide a support system for a satellite dish antenna that allows for variable height and angular positioning of the satellite dish.

The present invention comprises a satellite dish antenna support system comprising, a base support member, having square tube steel section capable of being fastened to a standard size square receiver hitch. The system also includes a pair of vertical support members, the first support member which is capable of telescopically receiving the second, extends upwardly from the base support member. The first support member attaches by any suitable means to an angle iron coupled to the base support member. The second support member is capable of telescoping in an upwardly direction

and can be fixed at various heights. A satellite dish antenna fastens onto the upper region of the second support member via the standard satellite dish antenna LNB arm/antenna-back assembly.

One embodiment of the present invention comprises a satellite dish support system having a pair of vertical support members, telescopically related, including a cavity in the outer tube wherein a wingnut bolt may be introduced to provide a locking means sufficient to allow for upward telescoping of the other support member.

Another embodiment of the present invention comprises a satellite dish support system whereby a column, or multiple columns, of cavities or detents are located along the length of the inner tubular member. This embodiment allows for various alignments and lengths of the relative tubular members.

It should be noted that the same telescoping result could be obtained by situating the locking means and columns of cavities at the upper portion of the outer and inner vertical support members, respectively. In addition, the present invention could be constructed using hollow support members of either circular, or non-circular dimensions. For purposes of example, and not limitation, hollow square members could be related telescopically in a similar fashion. Also, a variety of nut and bolt combinations, and various locking pins, could be used as a locking means. Further, the support materials could be steel, plastic, or other suitable rigid material capable of stable antenna support.

Other objects and advantages of the present invention will be recognized when the following description is considered along with the drawings.

BRIEF DESCRIPTION OF SEVERAL VIEWS OF THE DRAWING

FIG. 1 is a perspective view showing the satellite dish antenna support system mounted to a vehicle via the vehicle hitch receiver.

FIG. 2 is a side elevational view of the satellite dish antenna support system.

FIG. 3 is a side elevational view of the single columned receiving area embodiment of the satellite dish antenna support system.

FIG. 4 is a side elevational view of the multiple columned receiving area embodiment of the satellite dish antenna support system.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings, **FIG. 1** is a perspective illustration showing the satellite dish antenna support system **8**, mounted to the trailer hitch receiver of a vehicle, with satellite dish antenna in place.

Referring to **FIG. 2**, a side elevational view is shown, depicting base support **2**, capable of being received by a vehicle trailer hitch receiver and locked in place via any suitable means utilizing receptacle **1**. The first support member **4** is shown affixed to an angle iron via bolt and nut configurations **3**. Second support member **6** is shown in telescopic relation to support member **4** via locking pin **5**.

Referring to **FIG. 3**, the system **8** is provided with a plurality of inner receiving areas **7**, to enable a variety of telescoping positions via locking means **5**

FIG. 4 shows an alternate embodiment of the satellite dish antenna system having multiple columns of the plurality of receiving areas **7**, allowing for radial, as well as vertical relative positioning of support member **6**.